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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/733,955	12/11/2003	Tasso R. Sales	SP02-268	8150
22928	7590	06/30/2005	EXAMINER	
CORNING INCORPORATED			CONSILVIO, MARK J	
SP-TI-3-1			ART UNIT	
CORNING, NY 14831			PAPER NUMBER	
			2872	

DATE MAILED: 06/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/733,955

Applicant(s)

SALES, TASSO R.

Examiner

Mark Consilvio

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 12/11/2003.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Priority*

Receipt is acknowledged of the claim for benefit of Title 35, United States Code, Section 120 of the United States provisional application 60/427,226.

### *Information Disclosure Statement*

The information disclosure statement filed 12/11/2003 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. Further, the information disclosure statement fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language.

Accordingly, the information disclosure statement filed 12/11/2003 has been placed in the application file, but not all the information referred to therein has not been considered.

### *Double Patenting*

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887; 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686

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F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-5 and 18-20 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-3 of U. S. Patent No. 6,813,077.

Although the conflicting claims are not identical, they are not patentably distinct from each other because no claimed structure distinguishes the pending claims from the patented claims.

With respect to claims 1-4 and 18-20, Claim 1 of Patent '077 provides all the structure necessary to meet the limitations of claims 1-4 including the substrate and the regularly spaced metal and dielectric stacked layers understood to be formed by the method of manufacturing a wire grid polarizer. Further, the method of claim 1 of Patent '077 provides the step of etching to form the wire grid pattern to meet the limitations of claims 18-20. It is noted that the functional language of claims 1, 2, and 20, is provided by claim 1 of Patent '077 or inherent to the product of its method. Specifically, though claim 1 of Patent '077 is silent to suppression of higher diffraction orders, this feature is inherent to wire grid produced by this method.

With respect to claim 5, claims 2 and 3 of Patent '077 provide all of the materials necessary to meet the required limitations.

***Claim Objections***

Claim 5 is objected to because of the following informalities: Silicon (Si) being a semiconductor is not generally referred to as a dielectric or insulator. The claim should be amended to exclude this material or dielectric layer requirement removed. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It unclear how “all illumination of a given polarization” can be both substantially transmitted and substantially suppressed as required by the combined limitations of claims 1 and 2. If the applicant intends to refer to different polarization states, then the claims should be amended accordingly.

Claims 17, 19 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite in that it fails to point out what is included or excluded by the claim language. Claim 17 is an omnibus type claim and claims 19 and 20 inherit this problem.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless -(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-8, 15, and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Kurtz et al. (US Patent No. 6,532,111) (herein Kurtz).

With respect to claim 1, Kurtz discloses a grid polarizer comprising: a substrate (305); and a plurality of stacked metal and dielectric layers (324, 322, 342), having a width  $w$ , disposed on the substrate (305) and forming a parallel grid (310) of stacked layers, the stacked layers (324, 322, 342) spaced apart to form a repetition space between the stacked layers,  $P$ , such that no diffraction orders are allowed to propagate except the zero order resulting in a grid polarizer that is capable of transmitting substantially all illumination of a given polarization while suppressing at least of portion of the illumination reflected due to an orthogonal polarization component (fig. 5d). While this last feature is not explicitly stated, one of ordinary skill can understand that this feature is inherent to the structure disclosed. Since the repetition space between the stacked layers, or pitch, is small enough (i.e. less than the wavelength of incident light), then the grid will suppress higher diffraction orders. See, for example, cols. 1-3.

With respect to claim 2, Kurtz discloses the device is capable of suppressing substantially all of the illumination of a given polarization while suppressing at least of portion of the illumination reflected due to an orthogonal polarization component (col. 13, lines 54-65).

With respect to claim 3, Kurtz discloses the device comprises first (324), second (342) and third layers (322) (fig. 5d).

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With respect to claim 4, Kurtz discloses the first layer (324) comprises a metal and is adjacent the substrate (305), the second layer (342) comprises a dielectric and is adjacent the first layer (324), and the third layer (322) comprises a metal and is adjacent the second layer (342) (fig. 5d).

With respect to claim 5, Kurtz discloses the first metal and third metal layers comprise either gold or alumina and the second dielectric layer comprises either Si or SiO<sub>2</sub> (col. 14, lines 39-42).

With respect to claim 6, Kurtz discloses the thickness of the first layer is thicker than the penetration depth of the metal comprising the first layer such that the layer reflects substantially all incident light polarized in a direction parallel to the orientation of the grid ().

With respect to claim 7, the thickness of the third layer has a thickness operable to allow transmission into the second layer.

With respect to claim 8, Kurtz discloses the thickness of the third layer is less than or equal to 100nm (col. 13, lines 37-42).

With respect to claim 15, Kurtz discloses each of the stacked layers have a substantially equal width.

With respect to claim 20, Kurtz discloses that the transmission intensity of the reflection coefficient is less than 1.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9-14, 16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kurtz et al. (US Patent No. 6,532,111).

With respect to claims 9-14, Kurtz discloses or suggests all the limitations of claims 1, 3, 5 and 7 as stated supra. Though not all the limitations of claims 9-14 are expressly disclosed, Kurtz does teach values with the some of the required ranges and a general desirability to adjust the various parameters of the stacked layers to improve performance level. Therefore, absent a showing of criticality, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the teachings of Kurtz to the desired ranges and specifications to optimize performance.

With respect to claim 16, Kurtz discloses or suggests all the limitations of claims 1, 3, 4, 7 and 13 as stated supra. Though Kurtz does not expressly disclose each of the stacked layers has a varying width, such structures are well known in the art. Therefore, absent a showing of criticality, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the teachings of Kurtz to vary the width of the stacked structures to optimize performance.

With respect to claim 18, Kurtz discloses or suggests all the limitations of claims 1 and 3 as stated supra. Though Kurtz is silent to the substrate including etched regions, etching is a well-known method of forming a grid polarizer. It is noted that the method of manufacturing a product does not distinguish over the prior art unless the final product distinguishes over the prior art.

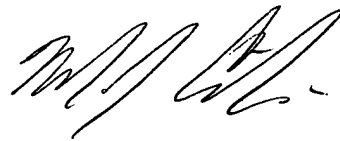


*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Consilvio whose telephone number is (571) 272-2453. The examiner can normally be reached on Monday thru Friday, 8:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on (571) 272-2312. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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